IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF	: Yoshio Tomoda et al.
SERIAL NUMBER	: 10/725,990
FOR	: METHOD OF DECREASING ACRYLAMIDE IN FOOD COOKED UNDER HEAT
FILED	: December 1, 2003
GROUP ART UNIT	: 1761
EXAMINER	: Lien TRAN.

DECLARATION UNDER 37 C.F.R. 1.132

Assistant Commissioner for patents
Washington, D.C. 20231

Sir:

I, Tomo Takayama, hereby declare and state that:

I received a Bachelor of Agriculture from Tohoku University in March 1999 and a Master's degree in Agricultural Science from Tohoku University in March 2001.

I joined Toyo Suisan Kaisha, Ltd. in April 2001, and have been employed, since then I have been engaged in research and development of instant noodles.

I am a co-inventor of the present invention described and claimed in the above-identified application.

I have conducted the following experiments:

As can be concluded from the results of the experiments, a protein is not effective for decreasing the content of acrylamide. Comparative Example 1 is a control in which no protein was added, whereas Comparative Example 2 is an example in which wheat gluten was added, and further Comparative Example 3 is an example in which milk protein was added.

DECLARATION

1. Method of preparation of instant fried noodles

1.1 Comparative Example 1

Five kg of wheat flour, and 1.6 kg of water, to which 76 g of salt and 16.4 g of "kansui"(i) were added and stirred, were charged to a mixer and kneaded for 18 minutes so as to obtain noodle dough. "Kansui"(i) contained 40% of potassium carbonate, 27% of sodium carbonate, 18% of sodium metaphosphate, 10% of sodium polyphosphate, 4% of sodium dihydrogenphosphate, and 1% of sodium pyrophosphate.
The noodle dough thus obtained was stretched using rollers by the ordinary method so as to obtain a dough sheet having a thickness of 0.77 mm and, then, the dough sheet was cut by a square cutting roll No. 20 so as to obtain strands of the noodle having a width of 1.5 mm.

These strands of noodle were steamed for 90 seconds by the ordinary method, followed by spraying a seasoning solution containing 5.72% of salt and 1.34% of sodium glutamate and having a pH value of 6.80.

Further, these strands of noodle were cut into a prescribed length and shaped into a molding block, followed by frying the cut strands noodle at 150℃ for 120 seconds with palm oil, thereby obtaining fried noodles. Then, the fried noodles were put in a cup, followed by housing a soup into the cup and subsequently sealing the cup so as to obtain instant fried noodles placed in the cup.

1.2 Comparative Example 2

Five kg of wheat flour and **100 g of wheat gluten**, and 1.6 kg of water, to which 76 g of salt and 16.4 g of "kansui"(i) were added and stirred, were charged to a mixer and kneaded for 18 minutes so as to obtain noodle dough. "Kansui"(i) contained 40% of potassium carbonate, 27% of sodium carbonate, 18% of sodium metaphosphate, 10% of sodium polyphosphate, 4% of sodium dihydrogenphosphate, and 1% of sodium pyrophosphate.

The noodle dough thus obtained was stretched using rollers by the ordinary method so as to obtain a dough sheet having a thickness of 0.77 mm and, then, the dough sheet was cut by a square cutting roll No. 20 so as to obtain strands of the noodle having a width of 1.5 mm.

These strands of noodle were steamed for 90 seconds by the ordinary method, followed by spraying a seasoning solution containing 5.72% of salt and 1.34% of sodium glutamate and having a pH value of 6.80.

Further, these strands of noodle were cut into a prescribed length and shaped into a molding block, followed by frying the cut strands noodle at 150℃ for 120 seconds with palm oil, thereby obtaining fried noodles. Then, the fried noodles were put in a cup, followed by housing a soup into the cup and subsequently sealing the cup so as to obtain instant fried noodles placed in the cup.

1.3 Comparative Example 3

Five kg of wheat flour, and 1.6 kg of water, to which 76 g of salt and 16.4 g of "kansui"(i) and **15 g of milk protein** were added and stirred, were charged to a mixer and kneaded for 18 minutes so as to obtain noodle dough. "Kansui"(i) contained 40% of potassium carbonate, 27% of sodium carbonate, 18% of sodium metaphosphate, 10% of sodium polyphosphate, 4% of sodium dihydrogenphosphate, and 1% of sodium pyrophosphate.

The noodle dough thus obtained was stretched using rollers by the ordinary method so as to obtain a dough sheet having a thickness of 0.77 mm and, then, the dough sheet was cut by a square cutting roll No. 20 so as to obtain strands of the noodle having a width of 1.5 mm.

These strands of noodle were steamed for 90 seconds by the ordinary method, followed by spraying a seasoning solution containing 5.72% of salt and 1.34% of sodium glutamate and having a pH value of 6.80.

DECLARATION

Further, these strands of noodle were cut into a prescribed length and shaped into a molding block, followed by frying the cut strands noodle at 150℃ for 120 seconds with palm oil, thereby obtaining fried noodles. Then, the fried noodles were put in a cup, followed by housing a soup into the cup and subsequently sealing the cup so as to obtain instant fried noodles placed in the cup.

2. Results

For each of the instant fried noodles obtained by the above-described respective preparation methods, the content of acrylamide was measured by the method described in the specification of the present application, page 60, line 1 to page 62, line 16. The results are shown in the following table.

Table

	Comparison 1	Comparison 2	Comparison 3
Blending condition			
<Main raw material>			
Wheat flour	5.0 kg	5.0 kg	5.0 kg
Wheat gluten	—	**100 g**	—
<Sub-raw material>			
Refined salt	76 g	76 g	76 g
"Kansui"(i)	16.4 g	16.4 g	16.4 g
Milk protein	—	—	**15 g**
<Seasoning component>			
Refined salt	57.2 g	57.2 g	57.2 g
Sodium glutamate	13.4 g	13.4 g	13.4 g
Water	1.0 L	1.0 L	1.0 L
Analyzed AA value(%)	100	96	97

As the results of the experiments indicate, the proteins are not effective for decreasing the content of acrylamide.

DECLARATION

I, the undersigned, declare further that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of this application or any patent issuing thereon.

Tomo Takayama

Tomo Takayama

Nov. 7. 2005

Date